

insulin, must be responsible for diabetic renal disease. There are many reports of abnormal blood rheology in diabetics, although such reports are ignored by most authorities in diabetic nephropathy. Working on the basis that the thixotropic nature of the glomerular basement membrane confers permeability dependent on pressure,<sup>2</sup> I have proposed that diabetic nephropathy is caused by impaired glomerular blood flow due to the intrinsic stiffness of diabetic red blood cells.<sup>3</sup> This hypothesis goes some way towards integrating the observations of haemorrhologists and nephrologists but, more importantly, provides a basis for optimism among diabetics as it allows other treatment options to be considered. Perhaps the most promising approach entails the haemorrhological benefits of dietary supplementation with essential fatty acids. Houtsmuller *et al*<sup>4</sup> reported cardiovascular benefits in diabetics given linoleic acid as a dietary supplement. This finding was confirmed by Iacono *et al*,<sup>5</sup> who concluded that increased dietary polyunsaturated fatty acids were important factors in lowering blood pressure, and other workers have reported reductions in blood pressure induced by diet. Barcelli and Pollak have questioned whether or not there is a place for polyunsaturated fatty acids in the prevention and treatment of renal disease.<sup>6</sup> Some polyunsaturated fatty acids have been shown to improve blood rheology. Therefore, as diabetics suffer from both hypertension and renal disease, it seems important to investigate the response of these complications to essential fatty acid dietary supplements.

Whether or not the reported improvements in cardiovascular function after supplementation with fatty acids were mediated by haemorrhological improvements has yet to be investigated. Whatever the means by which renal function was improved, however, the use of diets supplemented by fatty acids to prevent renal disease may necessitate changes in current approaches to kidney physiology.

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SIR,—Dr J J Bending and his colleagues described the evolution of renal disease in 12 insulin dependent diabetics selected as having intermittent clinical proteinuria by the Albustix test concluded, "Intermittent clinical proteinuria therefore represents a late phase of diabetic nephropathy when glomerular function is already declining; its progression appears not to be influenced by intensified metabolic controls." Their data do not justify this conclusion.

The study deals with a heterogeneous group of patients: three patients had a normal median urinary albumin excretion rate, <12 µg/min (cases 4, 8, and 12), eight patients had microalbuminuria, with an excretion rate of 12-100 µg/min, and one patient (case 6) had a persistently raised excretion

rate, >200 µg/min (that is, diabetic nephropathy). The three normoalbuminuric patients had raised glomerular filtration rates of 182, 133, and 162 ml/min/1.73 m<sup>2</sup>, respectively. During the 24 month trial (12 months' run in on conventional insulin treatment followed by 12 months of unchanged conventional treatment for the patient in case 4 and continuous subcutaneous insulin infusion in cases 8 and 12) glomerular filtration rates decreased to 1.4, 0.9, and 2.4 ml/min/month, respectively, in the three normoalbuminuric cases. The normal rate of decline in insulin dependent diabetics with overt clinical diabetic nephropathy (defined as persistent proteinuria/albuminuria of 0.5/0.3 g/24 h on four consecutive urine samples) is 0.9-1.2 ml/min/month.<sup>1,3</sup> It is well documented that strict metabolic control diminishes the abnormally raised glomerular filtration rate in normoalbuminuric insulin dependent diabetics.<sup>4,5</sup> In Dr Bending's study the metabolic control seemed to improve in both treatment groups.

The study has, in my opinion, clearly shown that qualitative methods for early detection of renal disease—for example, Albustix—should be interpreted with great caution. It is generally recommended that quantitative methods—for example, radioimmunoassay—should be used to identify diabetics at risk of developing diabetic nephropathy (microalbuminuria) and for monitoring the evolution of diabetic nephropathy and the effects of antihypertensive treatment. Urinary albumin excretion rate varies from day to day by about 50%; it should always be measured repeatedly to classify the patient as being normoalbuminuric, microalbuminuric, or macroalbuminuric.

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- 1 Mogensen CE. Long-term antihypertensive treatment inhibiting progression of diabetic nephropathy. *Br Med J* 1982;285:685-8.
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\*The authors reply below.—ED, *BMJ*.

SIR,—We are sorry that Professor Simpson concluded that our paper on intermittent proteinuria and metabolic control in insulin dependent diabetic patients contained no new information. So far as we are aware it is the first prospective study of the clinical course of the changes in renal function accompanying intermittent clinical proteinuria in such people. The study was not designed to investigate the possible mechanisms for the breakdown of the glomerular barrier to albumin that occurs in patients with diabetic nephropathy, but we would refer Professor Simpson back to our previous work,<sup>1</sup> where he will find some of our views on this important subject. We also find it difficult to accept Professor Simpson's assertion that the glomerulus does not become "decrepit"—that is, damaged—in diabetic nephropathy. Our paper should not be interpreted as "pessimistic," but as an indication of the need for further investigation of renal behaviour earlier in diabetes, of the need to define a metabolic point of no return.

Dr Parving seems to have misunderstood the purpose of our study. It was designed to examine quantitatively the state of the kidney in the

clinically recognised phase of intermittent clinical proteinuria, an accepted precursor of persistent proteinuria with its serious prognostic consequences.<sup>2</sup> Most of the clinical observations have been based on serial semiquantitative Albustix tests. We used sensitive and precise quantitative methods to measure urinary albumin excretion in patients intermittently positive on Albustix testing for up to seven years before the study. We described considerable variability in excretion rates within and between patients. As Dr Parving points out, three patients had previously shown sterile urines positive on Albustix testing but during the study had albumin excretion rates largely within the normal range, except that on one occasion each two of them had values (42 and 52 µg/min) higher than we have ever seen in normal subjects. At present we can only speculate on the mechanism of this variability in albumin excretion rate; the long term outcome in these patients is also speculative.

The patient in case 8 is not classified as having a raised glomerular filtration rate (the upper limit of normal in our laboratory being 135 ml/min/1.73 m<sup>2</sup>). The patients in cases 4 and 12 were hyperfilterers at recruitment, but the glomerular filtration rate in case 4 fell during the study in spite of unchanged glycaemic control (mean HbA<sub>1c</sub>: run in period 9.8%, experimental period 9.6%). We have to conclude that progressive erosion of renal function begins long before the glomerular filtration rate has fallen to within the pathological range, that we know little about the mechanisms of this, and that there is no evidence that it is dramatically changed by improved glycaemic control.

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#### Accident department or general practice?

SIR,—Dr Tim Davies (25 January, p 241) makes the worthy observation that the perceptions of patients, which are "at the root of their preferences for treatment in hospital as against treatment in general practice for minor trauma and other emergencies," need changing so that general practice can be used as the primary agency for this service. If this is the case, whose attitudes and perceptions need changing? Also, if general practice assumes a higher profile in this field how much extra demand can be expected on general practitioners?

In January 1985 a census of all attendances to Darlington Memorial Hospital accident and emergency department was undertaken; 2479 patients attended for treatment. All were asked whether they had contacted their general practitioner or presented without referral. Only 286 (11.5%) claimed to have contacted their general practitioners before presentation.

The catchment population of the accident and emergency department closely approximates to the resident population. Using census population figures this allowed us to calculate rates of attendance at the department by age group for those persons attending without contacting their general practitioners (table). Children and young adults showed the highest rates of direct attendance. Parents of children and young adults must be persuaded to contact the GP instead of proceeding directly to the accident and emergency department.

Rate of attendance per 1000 population by age group for January 1985

Age group (years)	Attendance/1000 population*	Number
0-4	19.9	159
5-14	13.8	342
15-19	25.4	356
20-29	19.0	499
30-64	11.3	879
65-74	7.2	126
75+	8.0	126
Total		2487

\* Patients attending without consulting general practitioner.

A major factor influencing preferential attendance at an accident and emergency department is known to be the distance of the patient from the hospital. General practitioners practising near to accident and emergency departments may expect a greater proportion of the minor traumas to be dealt with there.

Sixty two general practitioners practise in Darlington Health Authority. If they dealt with these cases of minor trauma, and assuming an equal distribution of workload, each general practitioner could expect about 30 extra cases to deal with per month. Over 25% of emergencies occurred out of hours—600 pm to 800 am, with about 10% between 1100 pm and 700 am. Each general practitioner could therefore expect to receive about 10 calls "out of hours" a month and to be disturbed from his or her bed three to four times a month. The general practitioner covering for several colleagues could expect a substantial out of hours work commitment. Do general practitioners have the time? Do they have the facilities?

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SIR.—As a general practitioner working in a deprived urban area I did a survey in our practice similar to the one by Dr Tim Davies (18 January, p 241) and I found that 80% of our patients who attended casualty departments without referral were suffering from medical conditions or minor trauma well within the compass of the general practitioner practising from a health centre with a treatment room.

At that time we had an open surgery every morning, adequate appointments at other times, and a liberal attitude to home visits, but despite this accessibility many of our patients chose to make inappropriate visits to the casualty department for the reasons mentioned by Dr Davies, so general practitioners cannot always be blamed for the problem of patients using casualty department for primary care.

As long as casualty departments are prepared to see all comers 24 hours a day the problem will continue and is probably insoluble. Out of hours, apart from major trauma, casualty departments and deputising services see a very similar range of patients and there may be a case for some merging in the future.

General practitioners in urban areas can help to reduce the problem at casualty departments by being readily accessible and not opting out of treatment of minor trauma as many do now. Practice areas should be kept geographically compact or patients on the periphery will inevitably drift off to the casualty departments if these are more conveniently sited for them.

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## Gastrointestinal bleeding in Romford

SIR.—In response to our article (7 December, p 1609), Dr D St J Collier and Dr J A Pain (4 January, p 56) asked for the age and sex distributions of our patients. Only seven of the 53 patients taking non-steroidal anti-inflammatory drugs (four women and three men) were under 60 years of age; 24 were men and 29 women. Interestingly, of the 14 patients taking piroxicam, nine were men and five women, the reverse of the ratio for the group as a whole.

Professor W H W Inman (4 January, p 56) raised the question of the indications for treatment. Only seven of the 53 had rheumatoid arthritis (one taking piroxicam, one ketoprofen). All but three of the remainder had osteoarthritis. Professor Inman said that we were unfair to piroxicam and ketoprofen. However, in ensuring that patients bleeding while receiving these drugs were not more likely to have a history of peptic ulceration we were actually doing the reverse. This was important in view of the referenced claims for a low incidence of upper gastrointestinal haemorrhage among patients receiving these drugs. Similarly, by comparing our data with the regional prescribing frequency we tried to avoid being unfair to any drug. We know of no evidence that the size of the prescriptions of any individual non-steroidal anti-inflammatory drug should be greater than that of the rest, and this seems an unlikely occurrence with so many prescriptions.

Clearly, further studies are required, particularly on piroxicam, as well as more detailed information on prescribing frequency. We acknowledge that there are many questions still unanswered. Like most of your correspondents, however, we do think that prescribing information should be published so that potential problems can be detected early. In contrast to Messrs D St J Collier and J A Pain, we found the DHSS most helpful, but this was only after we had located the source of the prescription data.

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## Identifying employees who may harm others

SIR.—I share the concern of your anonymous correspondent (18 January, p 206) at the situation he described. Although the houseparent was a local authority employee there is no mention of the existence (or otherwise) of an occupational health service. Most local authorities have such a service, some being served by the occupational health services of their conterminous NHS authorities.

Newly appointed local authority employees in such areas are asked to complete a well designed (pre-employment) health questionnaire, which asks for details of present long term drug treatment as well as past and present illnesses. Employees are asked to attend for examination if indicated by the answers on the questionnaire, the GP sometimes being asked for further information. The questionnaire includes a section asking the employee for signed consent for GP or consultant information. This system, together with satisfactory character references and references from a past employer, should minimise the chances of the situation described occurring, though information may, of course, still be withheld.

The obtaining of medical information directly from a GP by a personnel officer is undesirable as a non-medical person cannot interpret it adequately and people may be wrongly refused posts because of diabetes, epilepsy, and other conditions. Your

correspondent also makes no mention of consent from his patient. Another point to be considered is the economic aspect of obtaining reports from GPs unless it is thought to be essential. Altogether 3400 questionnaires were received in this department in 1985 for new local authority staff, 270 were invited for examination, and 10 GP reports were requested.

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## Doctors and overpopulation

SIR.—The signatories of the letter from the Doctors and Overpopulation Group (1 February, p 344) describe themselves as "doctors involved in the specialty of reproduction," but their qualifications as economists are more doubtful.

It is not good enough to go on repeating the clichés about population growth being a cause of famines, when the most cursory study shows that famines never occur in densely populated countries like Singapore, Taiwan, Japan, and Hong Kong but only in sparsely populated countries like Ethiopia, the Sudan, Zaire, and Uganda. The very sparseness of the population contributes to the disaster, as it precludes the construction of essential infrastructure—transport and communications. The major problem facing aid workers in Ethiopia was not getting the food into the country, but distributing it when it had arrived.

It does not make sense to claim that "Africa has enough land to feed two and a half times its population," as if a country's capacity for food production were a finite, measurable statistic. We can calculate how much land is currently under cultivation, but the amount of uncultivated land which could be brought under cultivation were the demand for food to increase, coupled with technological advances which could increase the yield per acre, make the calculation of a possible food total unrealistic.

Scattered throughout the various statistical claims of the letter are references to family planning and the need to tie foreign aid to the implementation of family planning programmes. We would all agree that family is as important for couples in the developing world as it is here. It is, however, an unfortunate regression to the colonialist mentality to assume that the natives know nothing until we teach them. Many traditional societies have their own methods for spacing births. The intrusion into these cultures of modern Western attitudes towards sexuality, replete with pills, coils, and surgical procedures for eliminating fertility, can cause great personal suffering and severe social problems for the societies concerned.

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## Mediation of hidradenitis suppurativa by androgens

SIR.—We are pleased that the findings and conclusions of Dr Peter S Mortimer and colleagues (25 January, p 245) are in general agreement with our study,<sup>1</sup> published last year. We, however, were unable to show significant differences in total testosterone concentrations between patients with hidradenitis suppurativa and controls. Our series is now larger and confirms this. Like Dr Mortimer and colleagues we found a subpopulation of